THE CLAIMS

1. (Currently Amended) A method for identifying the type of golf club or golf ball ~~a plurality of golf clubs and golf balls~~, comprising:

storing image reference information for ~~each of the~~ a plurality of golf clubs and golf balls to provide a library of stored patterns, wherein each of the stored patterns is assigned a Eigen value;

acquiring an image of at least one of said balls and clubs during a swing with at least one camera system to provide a received pattern;

assigning an Eigen value to the received pattern;

matching the received pattern with a stored pattern ~~and~~

~~identifying with~~ using a computational device and the assigned Eigen values to identify at least one of said club or ball ~~based on a comparison to said image reference information using Eigen values~~.

2. (Currently Amended) The method according to claim 1, wherein ~~said identifying~~ the step of matching takes about six seconds or less.

3. (Currently Amended) The method according to claim 1, wherein ~~said identifying~~ the step of matching takes about one second or less.

4. (Original) The method according to claim 1, wherein said image reference information is based on a plurality of markers, wherein said markers comprise visible ink.

5. (Original) The method according to claim 4, wherein said markers comprise ink responsive to ultraviolet light.

6. (Original) The method according to claim 4, wherein said visible ink markers comprise limited spectrum markers responsive to one of colored light and fluorescent light.

7. (Original) The method according to claim 1, wherein said image reference information is based on inherent features of said balls and clubs.

8. (Canceled)

9. (Currently Amended) A method for identifying the type of a plurality of golf clubs and golf balls, comprising:

storing image reference information based on a plurality of markers for each type of the plurality of golf clubs and golf balls;

acquiring an image of at least one of said balls and clubs during a swing at least one camera system; and

identifying with a computational device the type of at least one of said club or ball based on a comparison to said image reference information in about six seconds or less using Eigen values.

10. (Previously Presented) The method according to claim 9, wherein said plurality of markers comprise visible ink.

11. (Original) The method according to claim 10, wherein said markers comprise ink responsive to ultraviolet light.

12. (Original) The method according to claim 10, wherein said visible ink markers comprise limited spectrum markers responsive to one of colored light and fluorescent light.

13. (Original) The method according to claim 9, wherein said image reference information is based on inherent features of said balls and clubs.

14. (Canceled)

15. (Currently Amended) A system for identifying the type of golf club and golf ball ~~a plurality of objects~~, comprising:

at least one camera system; and

a computational device capable of ~~identifying~~ comparing an acquired image ~~from~~ to a library of stored reference information and Eigen values and identifying at least one of the type of golf club and golf ball, wherein the type of golf club is determined by comparison of at least one parameter selected from the group consisting from manufacturer, head model, shaft model shaft stiffness, head loft, shaft length, and grip model to the library of stored reference information and Eigen values, and wherein the type of golf ball is determined by comparison of the ball model to the library of stored information and Eigen values.

16. (Currently Amended) The system according to claim 15, wherein the library of stored reference information comprises club manufacturer, club head model, club shaft model, club shaft stiffness, club head loft, club shaft length, club grip model, and ball model for a plurality of golf clubs and golf balls ~~said identifying is based on inherent factors of the object~~.

17. (Currently Amended) The system according to claim 15, wherein ~~said identifying is~~ the acquired image comprises a pattern based on a plurality of UV markers.

18. (Currently Amended) The system according to claim 15, wherein ~~said identifying is~~ the acquired image comprises a pattern based on a plurality of visible markers.

19. (Currently Amended) The system according to claim 15, wherein said library of stored reference information comprises about 200 or more objects, each assigned a unique Eigen value.

20. (Currently Amended) The method of claim 1, wherein the each of the stored patterns has a unique Eigen value ~~method identifies a plurality of golf balls~~.

21. (Currently Amended) The method of claim 9, wherein the step of acquiring comprises receiving a pattern formed from placement of fluorescent markers on the surface of the golf club or golf ball ~~method identifies a plurality of golf balls~~.

Please add the following new claims:

22. (New) The method of claim 1, wherein the image reference information comprises at least one of manufacturer information, club head model, club shaft model, club shaft stiffness, club head loft, club shaft length, club grip model, or ball model.

23. (New) The method of claim 9, wherein the type of golf club or golf ball is based on at least one of manufacturer, head model, shaft model shaft stiffness, head loft, shaft length, grip model, and ball model.